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ABSTRACT

[0084]

A restraining apparatus and method for limiting motion on the macro and micro scale during MRI and CT scans, by providing a custom fit, while also improving patient comfort. The restraining apparatus includes a disposable component, including castable and expandable sleeves used to fix the patient into a coil. The castable sleeve encircles the limb of a patient, and is filled with a quickly casting material. The cast material is patient compatible and preferably designed to augment imaging. The resulting cast is MRI compatible, safe and rapid setting, which will decrease the time to set up a patient for scanning, thereby further improving MRI productivity. The expandable sleeve encircles the castable sleeve and is inflatable such that the expandable sleeve conforms to the inner dimensions of a particular MRI coil, CT scanner, or other imaging device. Alternatively, the apparatus includes a castable sleeve for casting around a flex/wrap or surface coil. The surface coil is first cast around the limb of a patient, then the patient is fixed to the magnet.